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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/824,570	04/03/2001	Christof Eberspacher	225/49834	8702

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CROWELL MORING LLP  
INTELLECTUAL PROPERTY GROUP  
P.O. BOX 14300  
WASHINGTON, DC 20044-4300

EXAMINER	
SAVAGE, JASON L	
ART UNIT	PAPER NUMBER
1775	16

DATE MAILED: 03/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

A26

**Office Action Summary**

Application N .

09/824,570

Applicant(s)

EBERSPACHER ET AL.

Examiner

Jason L. Savage

Art Unit

1775

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 January 2003 .
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2,4,5,16,18,20 and 22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,5,16,18,20 and 22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_ .
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ .
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_ .
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_ .

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***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-2, 4-5, 16, 18, 20 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Kawamura et al. (US 5,249,661).

Kawamura teaches a wear-resistant coating on a synchronizing ring formed by flame spraying (col. 2, ln. 24-28). The coating contains between 5-30% by weight of solid lubricating ceramic particles which may be oxides, carbides, or nitrides of elements such as Ti, Si, B, Al, Mn, Cu, Co, Ni, Na, Cr, W and V (col. 4, ln. 14-25). The porosity of the coating is between 5-30% (col. 51-60).

Regarding the limitation that the particle size be less than 180  $\mu\text{m}$ , Kawamura teaches that the particle sizes prior to spraying are -150 mesh and -250 mesh (approximately 99  $\mu\text{m}$  and 58  $\mu\text{m}$ , respectively).

Regarding claim 2, although Kawamura does not teach the specific solid lubricants which are claimed in the listing of the more specific types of particles which are envisioned (col. 4, ln. 18-24), it is the position of the Examiner that the teaching that the particles may be an oxide of an element such as Ti is a teaching that the lubricant is  $\text{TiO}_2$  (col. 4, ln. 16-17) .

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Regarding claims 4 and 16, Kawamura teaches that the coating further includes a molybdenum alloy which may include elements such as Si and Ni (col. 3, ln. 56-59). Kawamura exemplifies that the molybdenum alloy contains Si and Ni (col. 5, ln. 67-68).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kawamura (US 5,249,661).

Kawamura teaches what is set forth above but is silent to the specific solid lubricants which are claimed. Kawamura does teach that the solid lubricating ceramic particles which may be oxides, carbides, or nitrides of elements such as Ti, Si, B, Al, Mn, Cu, Co, Ni, Na, Cr, W and V (col. 4, ln. 14-25). It would have been obvious to one of ordinary skill in the art at the time of the invention to have selected an oxide of titanium or a nitride of boron as the lubricating particle since Kawamura states that they are suitable materials. Furthermore, absent a teaching of the criticality of the claimed materials such as hexagonal boron nitride, it does not provide a patentable distinction over the prior art.

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***Response to Arguments***

5. Applicant's arguments filed 1-9-03 have been fully considered but they are not persuasive.

Applicant argues that Kawamura does not anticipate the claims because the claims state the coating contains a maximum (emphasis added) of 40% by weight of a solid lubricant while the coating of Kawamura only teaches a range of 5 to 30% by weight. This argument is not persuasive since the limitation of 'maximum' only identifies the upper limit of the solid lubricant. Any amount of lubricant being less than 40%, be it 1% to 39.99% would meet this limitation. Clearly, 5% and 30% are less than (emphasis added) 40% and as such, meet the claim limitation. Applicant seems to trying to claim the range that is not anticipated by Kawamura, namely, a loading of solid lubricant between 31-40%; however, the current claims are not limited to this range. The Examiner would caution Applicant that should he attempt to claim this narrowed range, he would need to show that there is proper basis for this particular range in the specification. After reviewing the specification, it is the position of the Examiner that there would not be sufficient basis to claim this narrowed range.

Applicant next argues that Kawamura does not teach the limitation that the solid lubricant have a particle size of no more than approximately 180  $\mu\text{m}$ . As was set forth in the rejection above, Kawamura teaches particles sizes of 99  $\mu\text{m}$  and 58  $\mu\text{m}$  which are clearly less than (emphasis added) 180  $\mu\text{m}$ .

Applicant next states that one of ordinary skill in the art would be able to infer the solid lubricant particle size from the Kawamura disclosure only if that individual is presented with the

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presently claimed invention. This argument is unclear, although it appears as though Applicant is arguing some form of hindsight reasoning. This is not the case as Kawamura clearly teaches particle sizes of 99  $\mu\text{m}$  and 58  $\mu\text{m}$ . Applicant's apparent assertion that one would need to refer to the present Application to determine the particle size of Kawamura is incorrect.

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry to this communication or earlier communications from the Examiner should be directed to Jason Savage, whose telephone number is (703)305-0549. The Examiner can normally be reached Monday to Friday from 6:30 AM to 4:00 PM.

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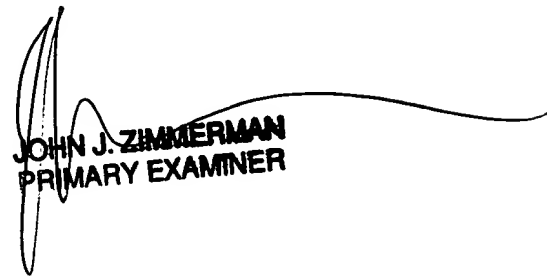
If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Deborah Jones, can be reached on (703)308-3822.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703)308-2351.



Jason Savage

3-13-03



JOHN J. ZIMMERMAN  
PRIMARY EXAMINER